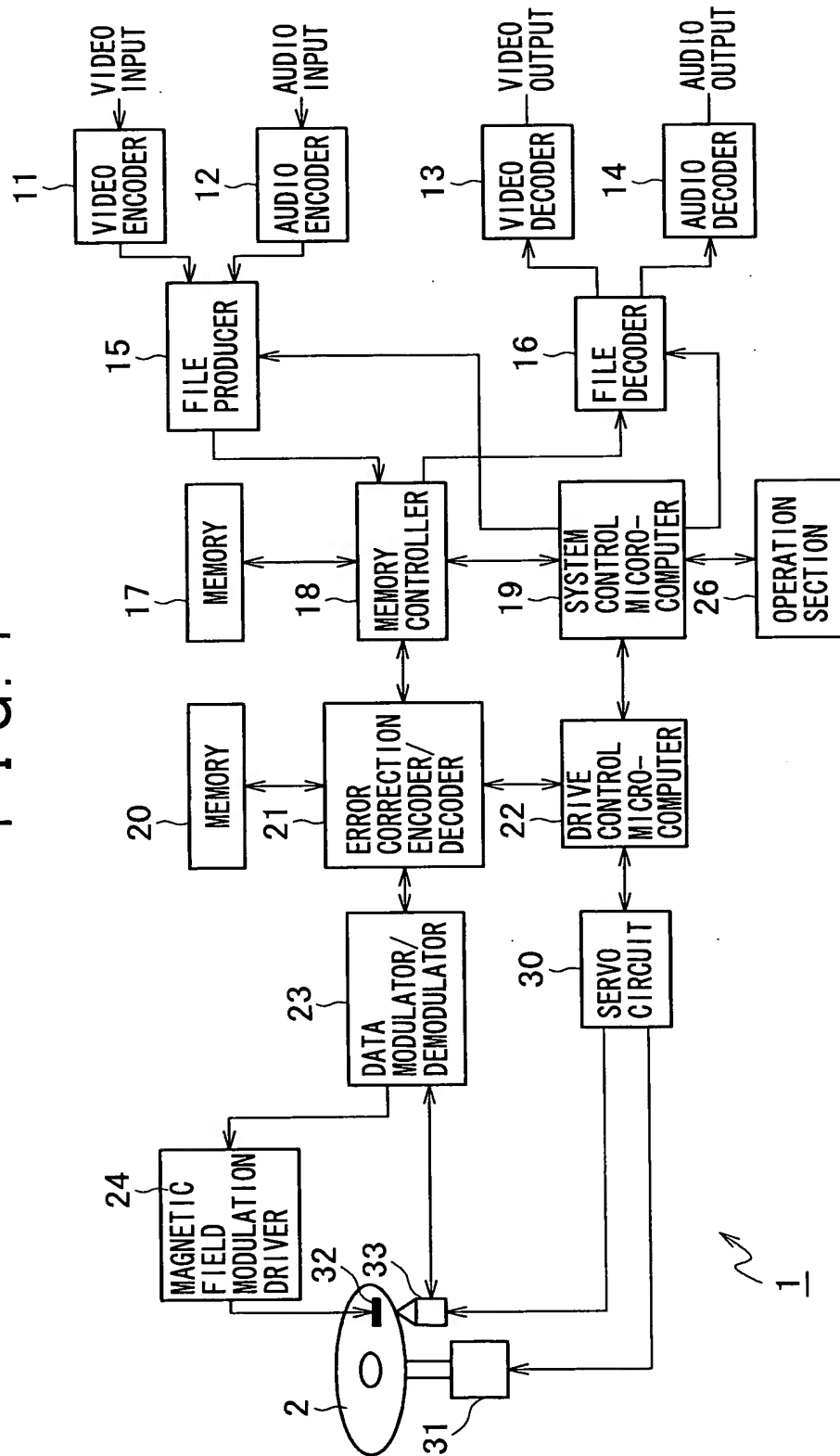


FIG. 1



## FIG. 2

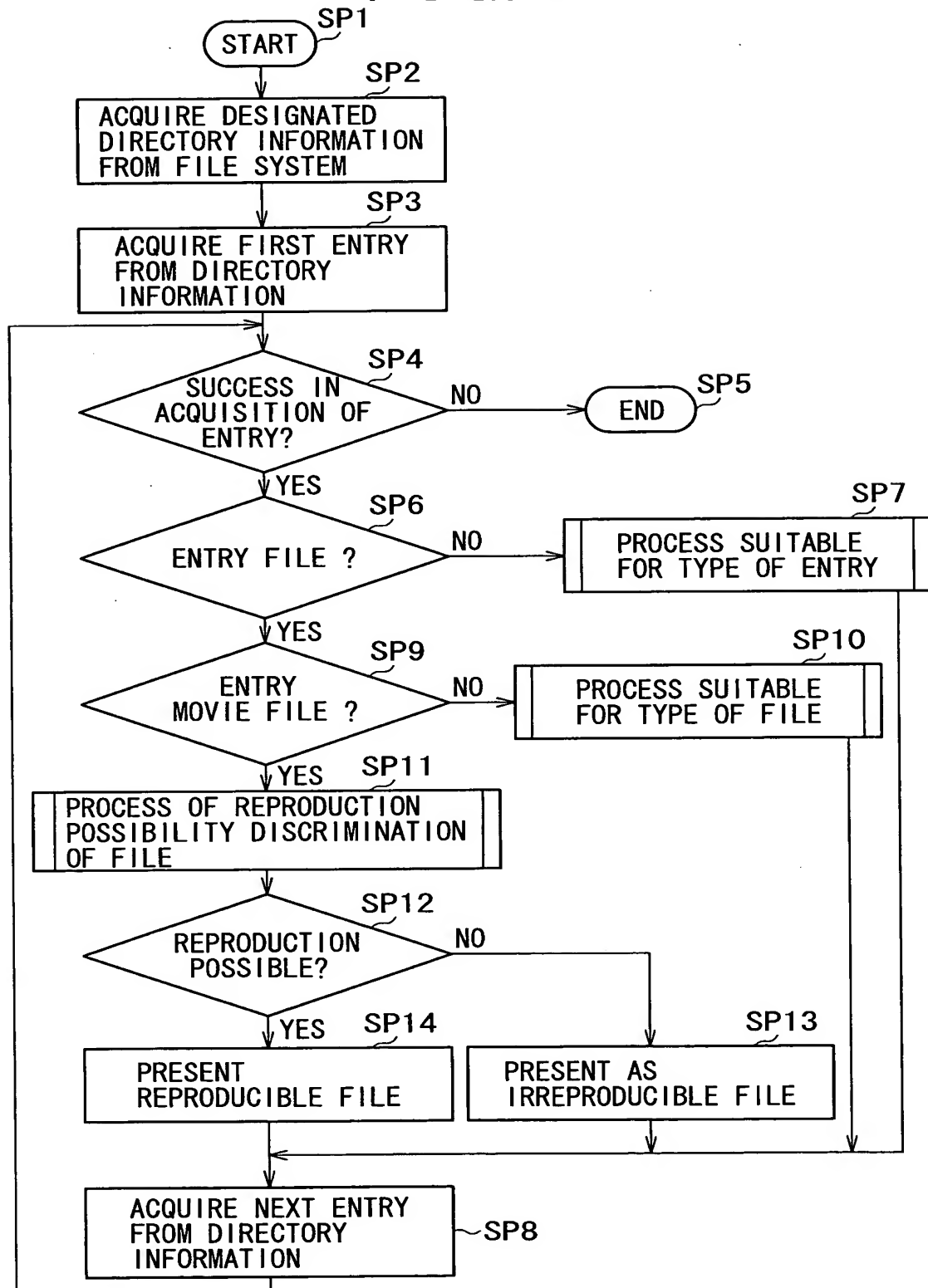


FIG. 3

3/31

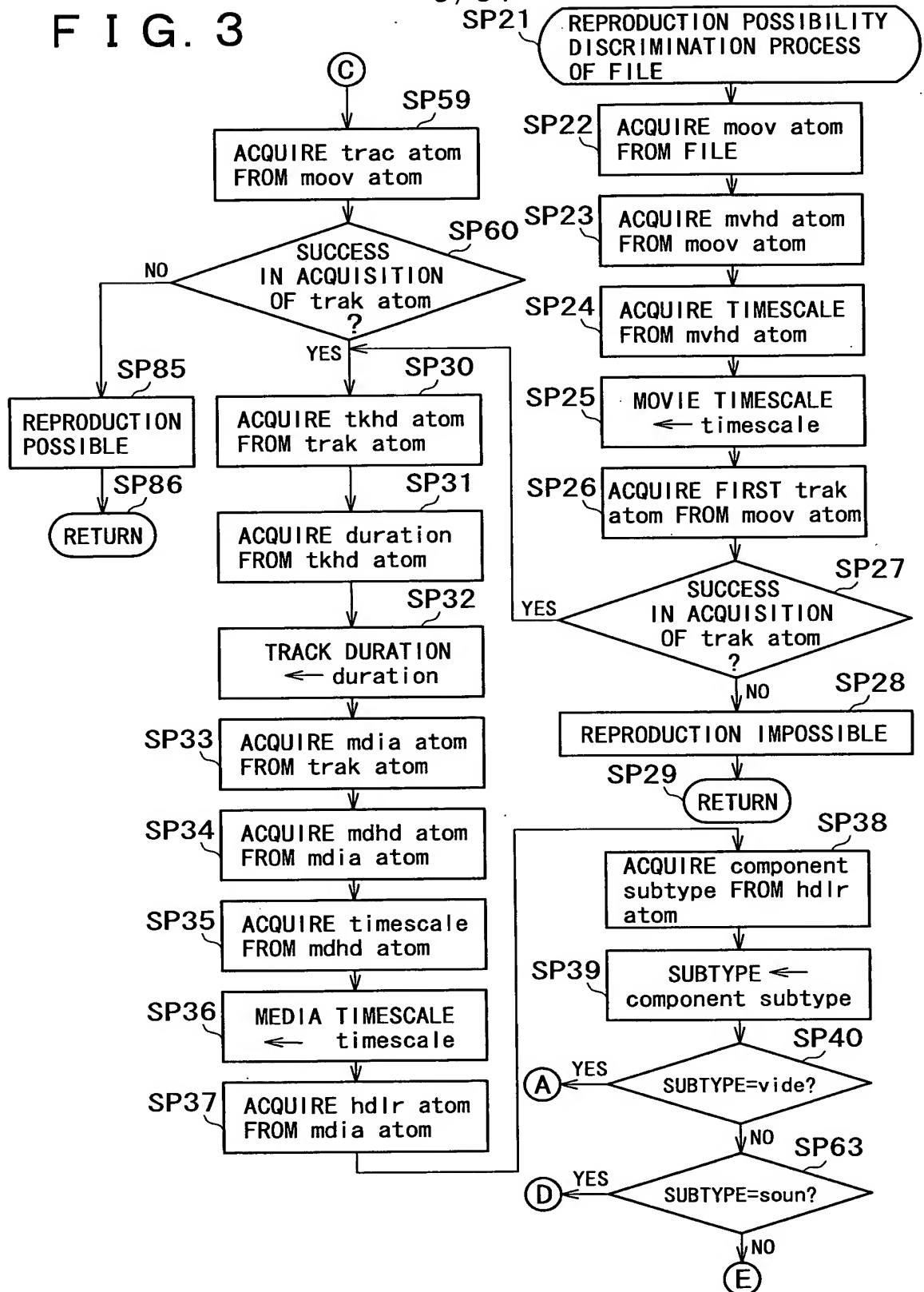


FIG. 4

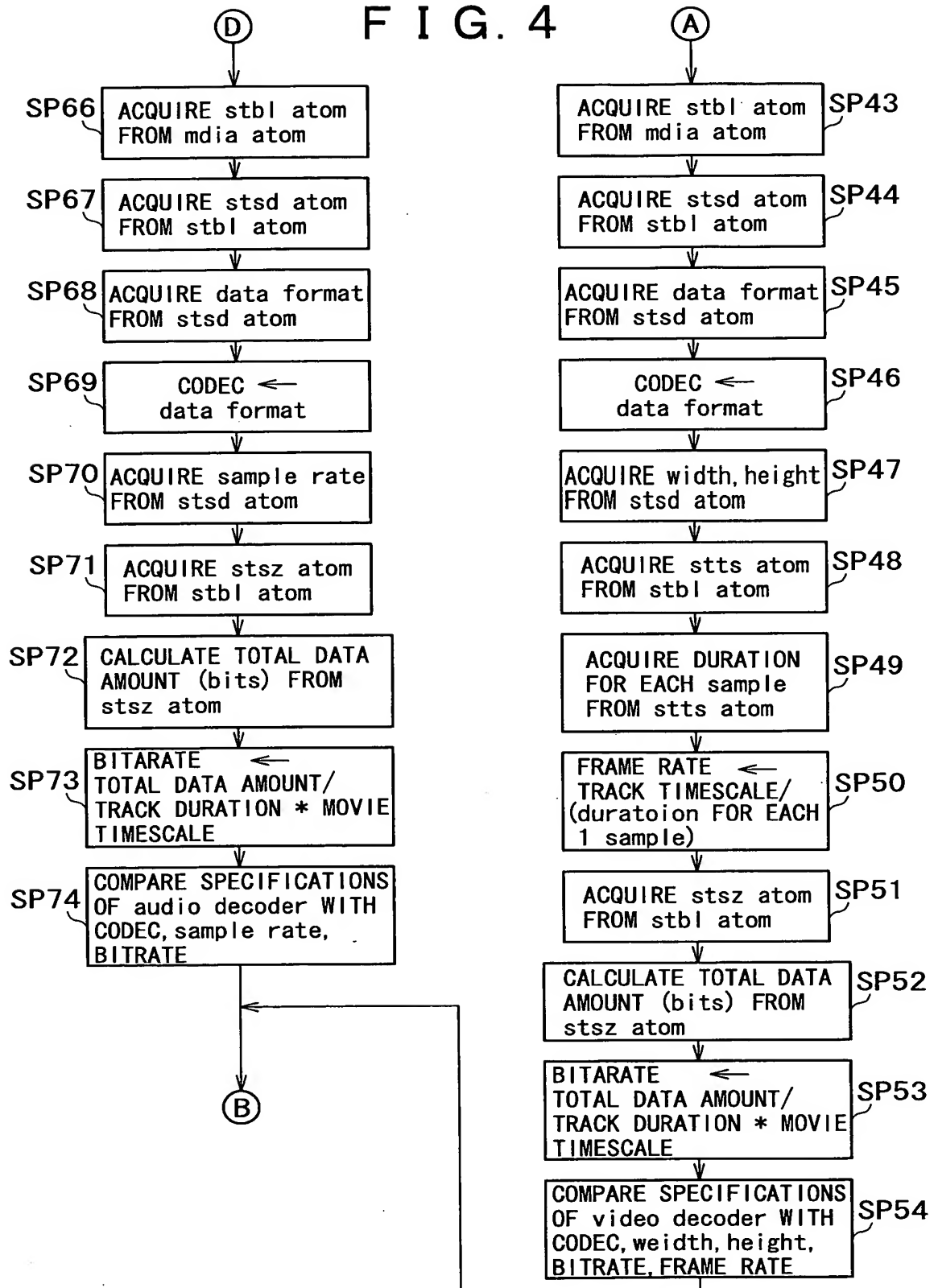


FIG. 5

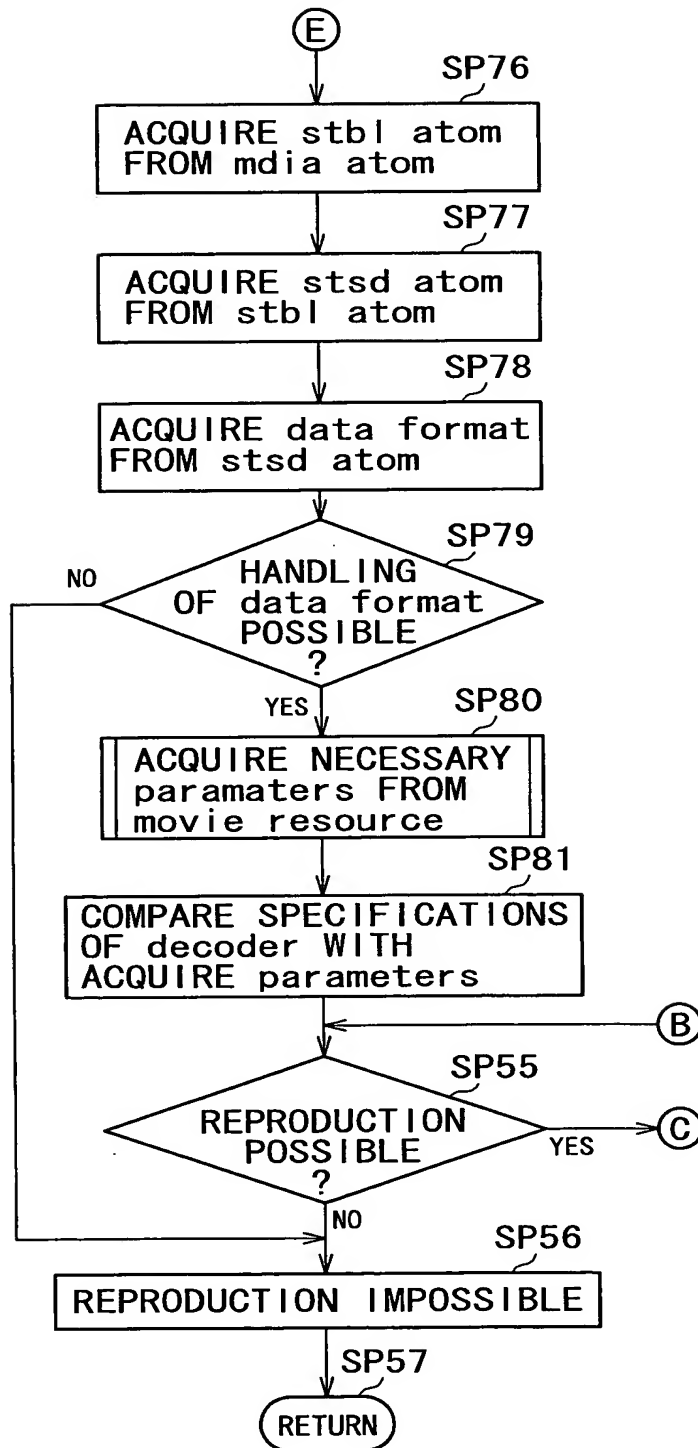


FIG. 6

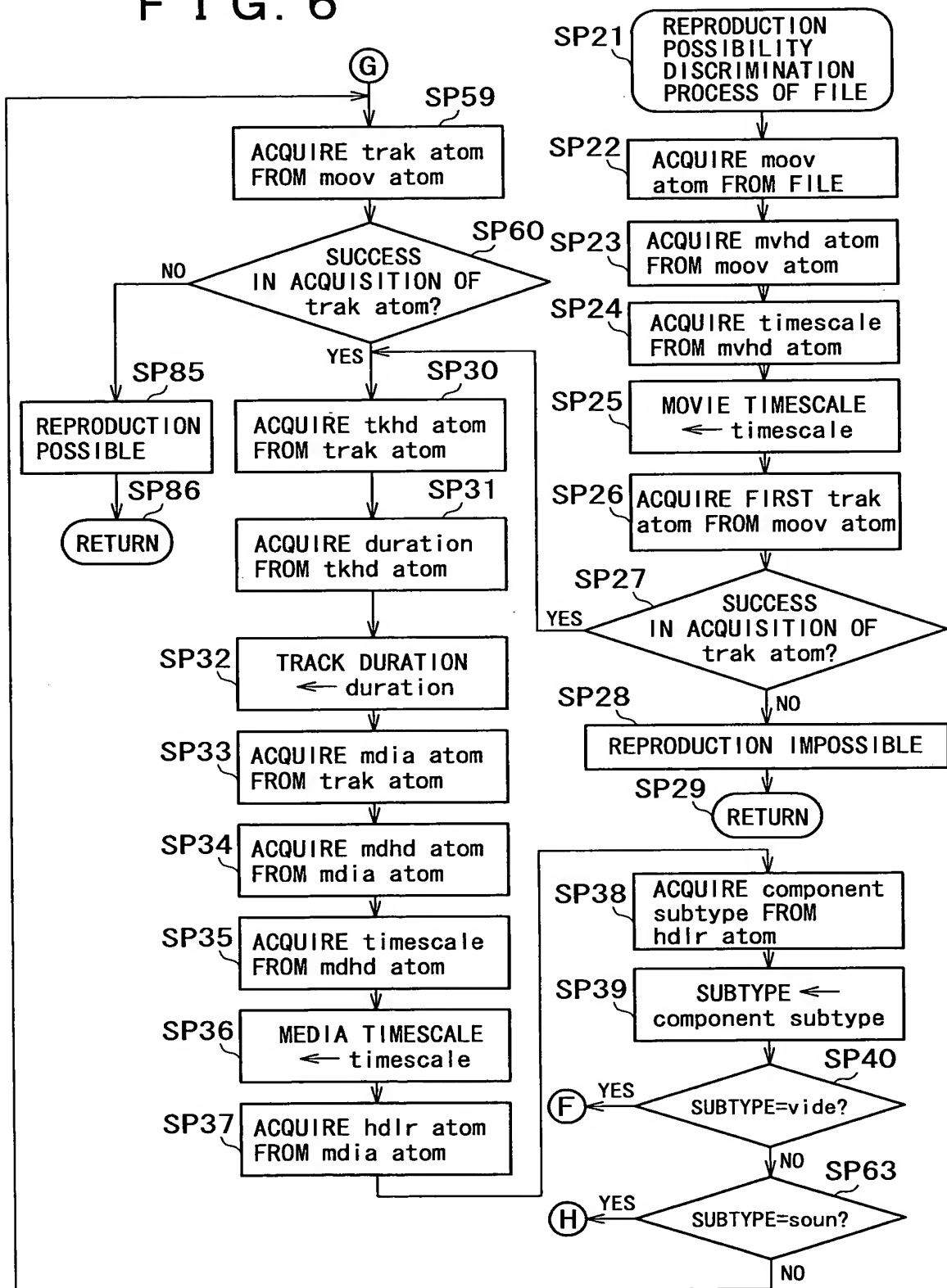
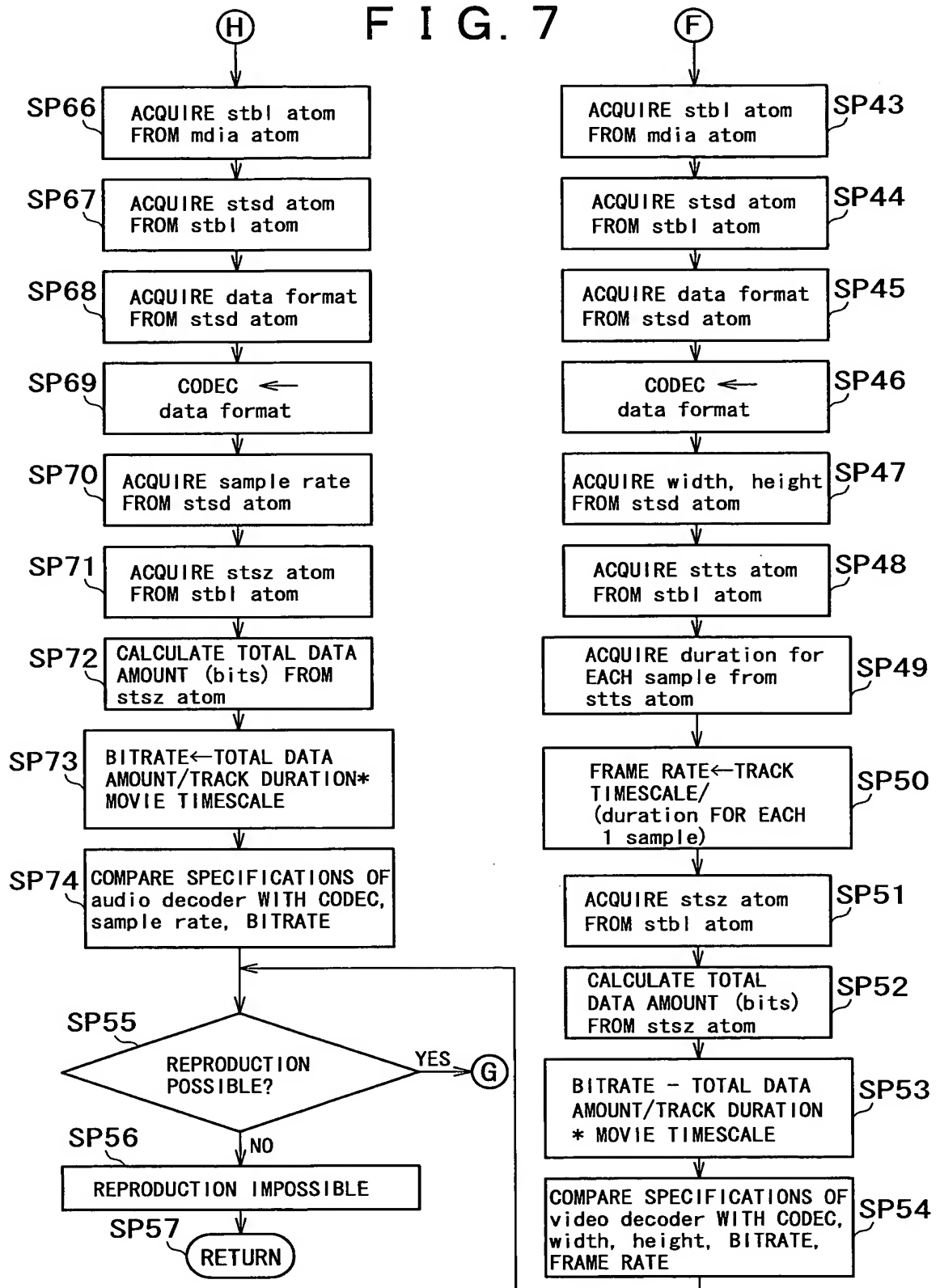


FIG. 7



# FIG. 8

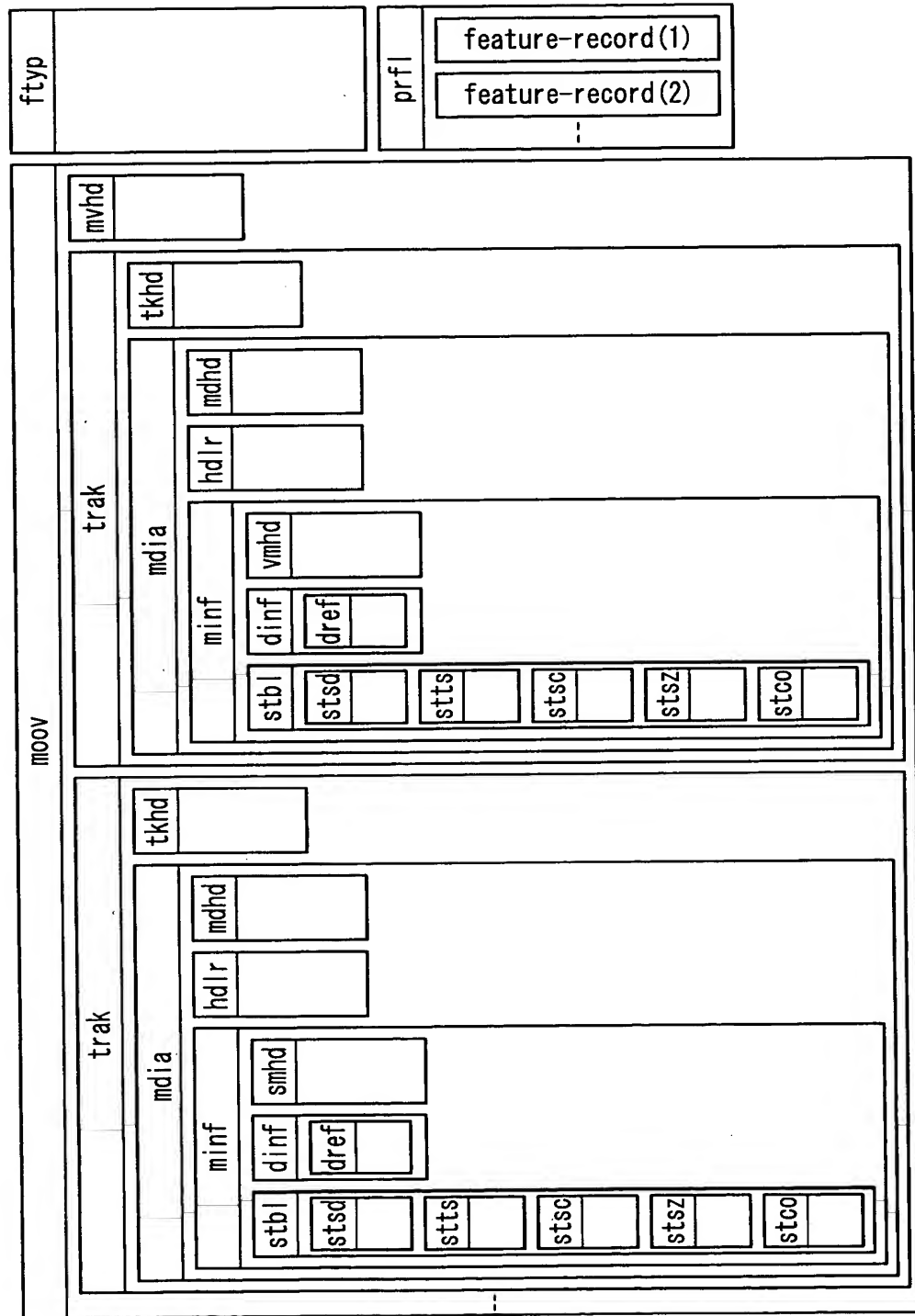




FIG. 9

| syntax  | Size [bytes]   |
|---|--|
| <pre>File Type Compatible Atom {<br/>    atom size<br/>    atom type = ftyp<br/>    Major Brand<br/>    Minor Version<br/>    /* Compatible Brand */<br/>    for (i = 0; i &lt; N; i++) {<br/>        Brand<br/>    }<br/>}</pre> | <div>4</div> <div>4</div> <div>4</div> <div>4</div> <div>4</div> |

FIG. 10

| syntax   | Size [bytes]   |
|--|--|
| <pre>Profile Atom {<br/>    atom size<br/>    atom type = prfl<br/>    Version<br/>    flags<br/>    feature-record-count<br/>    /* feature-record-list */<br/>    for (i = 0; i &lt; feature-record-count; i++) {<br/>        track-ID<br/>        sub-part-ID<br/>        feature<br/>        value<br/>    }<br/>}</pre> | <div>4</div> <div>4</div> <div>1</div> <div>3</div> <div>4</div> <div>4</div> <div>4</div> <div>4</div> <div>4</div> |

FIG. 11

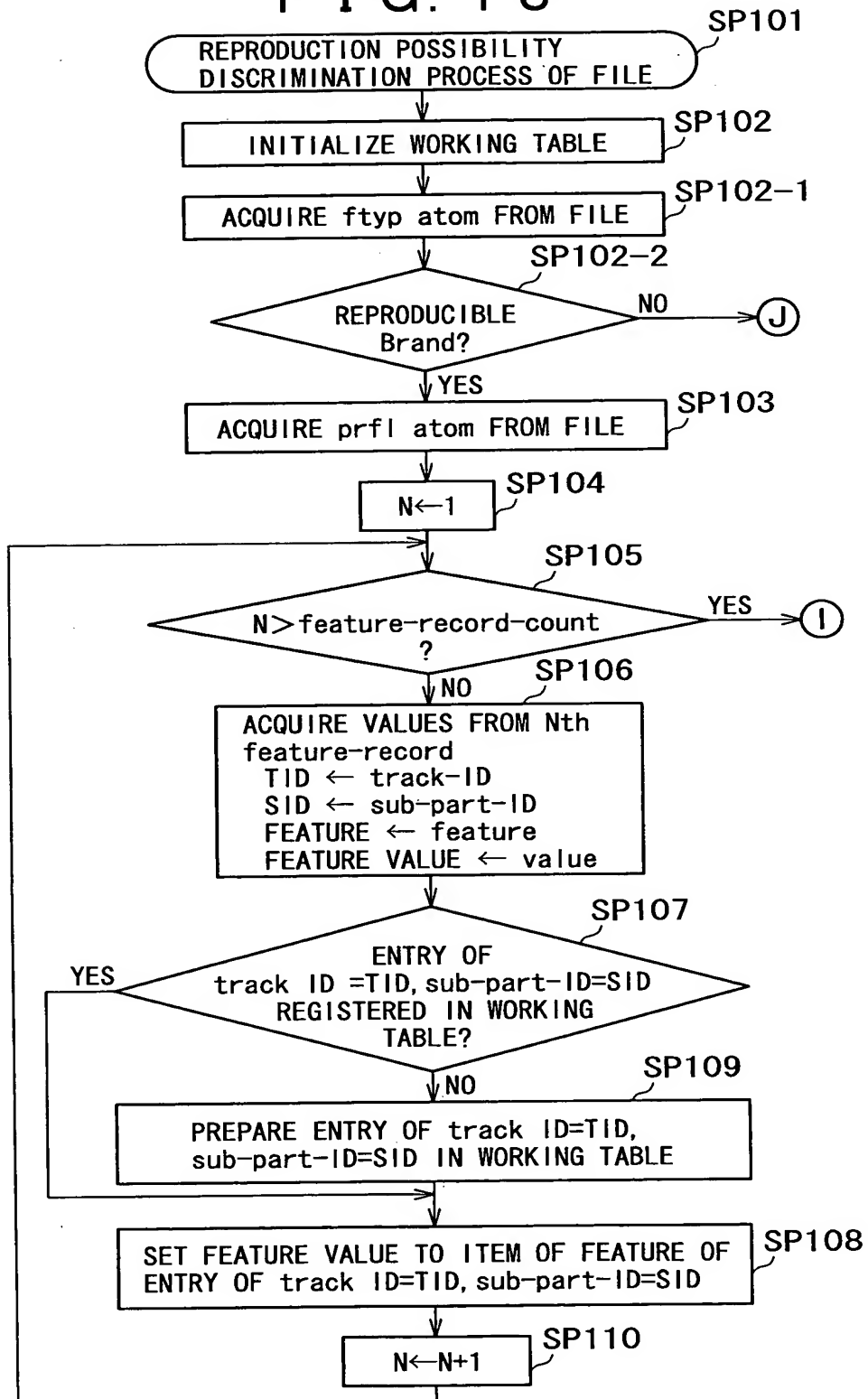
| feature | MEANING                             | value (EXAMPLE)                                   |
|---------|-------------------------------------|---|
| cdty    | TYPE OF CODEC                       | mp4v (MPEG4 video), mp4a (MPEG4 audio)            |
| brat    | BIT RATE OF DATA                    | 64000, 96000, 128000, 192000, 384000 [bps]        |
| frat    | VIDEO FRAME RATE                    | 10, 15, 24, 30 [fps]                              |
| srat    | AUDIO SAMPLING FREQUENCY            | 24000, 48000 [Hz]                                 |
| wdth    | VIDEO PICTURE SIZE (HORIZONTAL)     | 176, 352, 704, 720                                |
| hght    | VIDEO PICTURE SIZE (VERTICAL)       | 120, 144, 240, 288, 480, 576                      |
| frty    | FIXED FRAME OR VARIABLE FRAME       | cfr (FIXED frame rate), vfr (VARIABLE frame rate) |
| brty    | FIXED BIT RATE OR VARIABLE BIT RATE | cbr (FIXED bit rate), vbr (VARIABLE bit rate)     |

# FIG. 12

| feature-record-list |             |         |        |
|---------------------|-------------|---------|--------|
| track-ID            | sub-part-ID | feature | value  |
| 1                   | 1           | cdty    | mp4v   |
| 2                   | 1           | cdty    | mp4a   |
| 1                   | 1           | brat    | 384000 |
| 2                   | 1           | brat    | 128000 |
| 1                   | 1           | frat    | 15     |
| 1                   | 1           | wdth    | 352    |
| 1                   | 1           | hght    | 288    |
| 2                   | 1           | srat    | 48000  |
| 1                   | 1           | frty    | cfr    |
| 2                   | 1           | brty    | cbr    |
| ...                 | ...         | ...     | ...    |

prfl

## FIG. 13



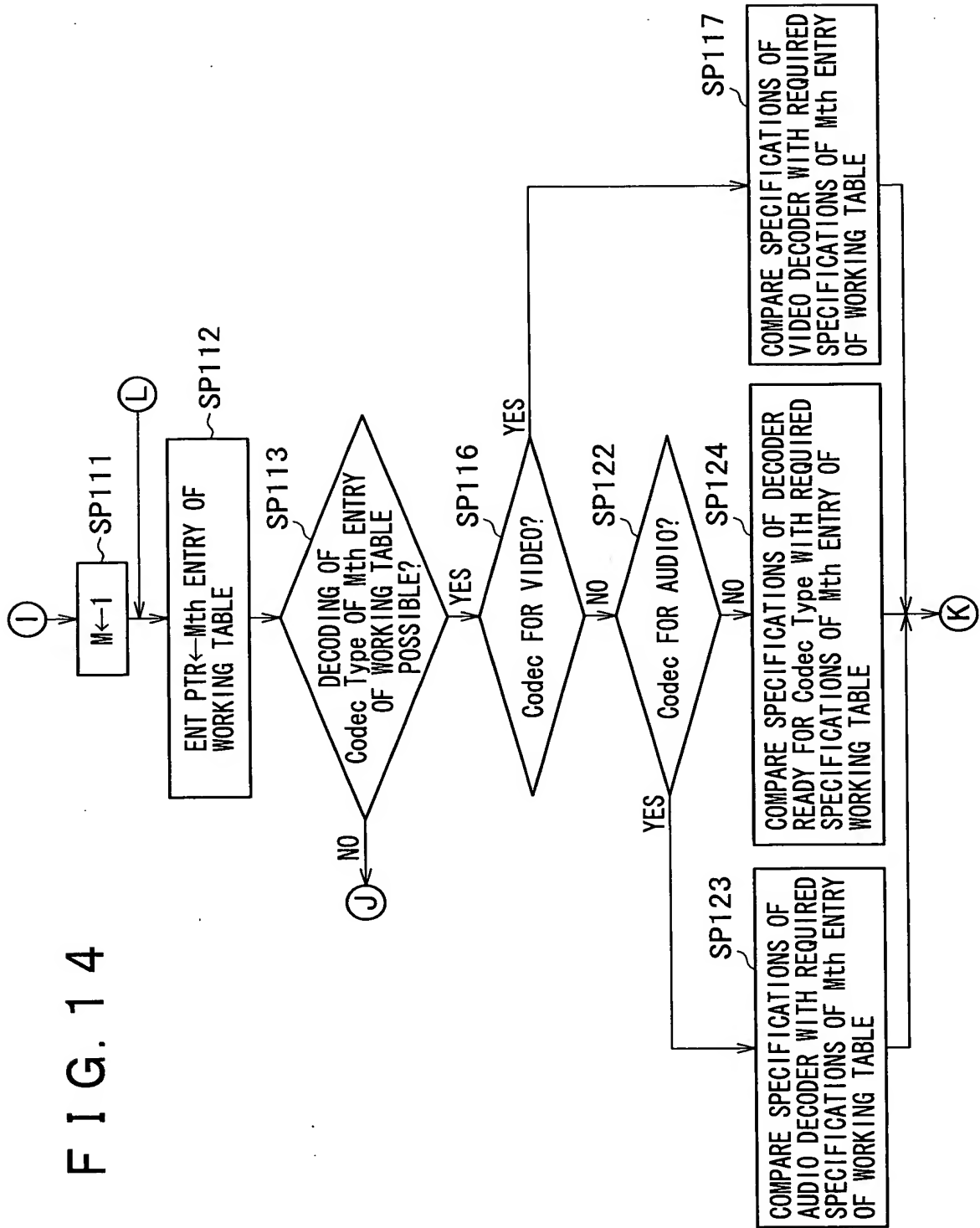


FIG. 15

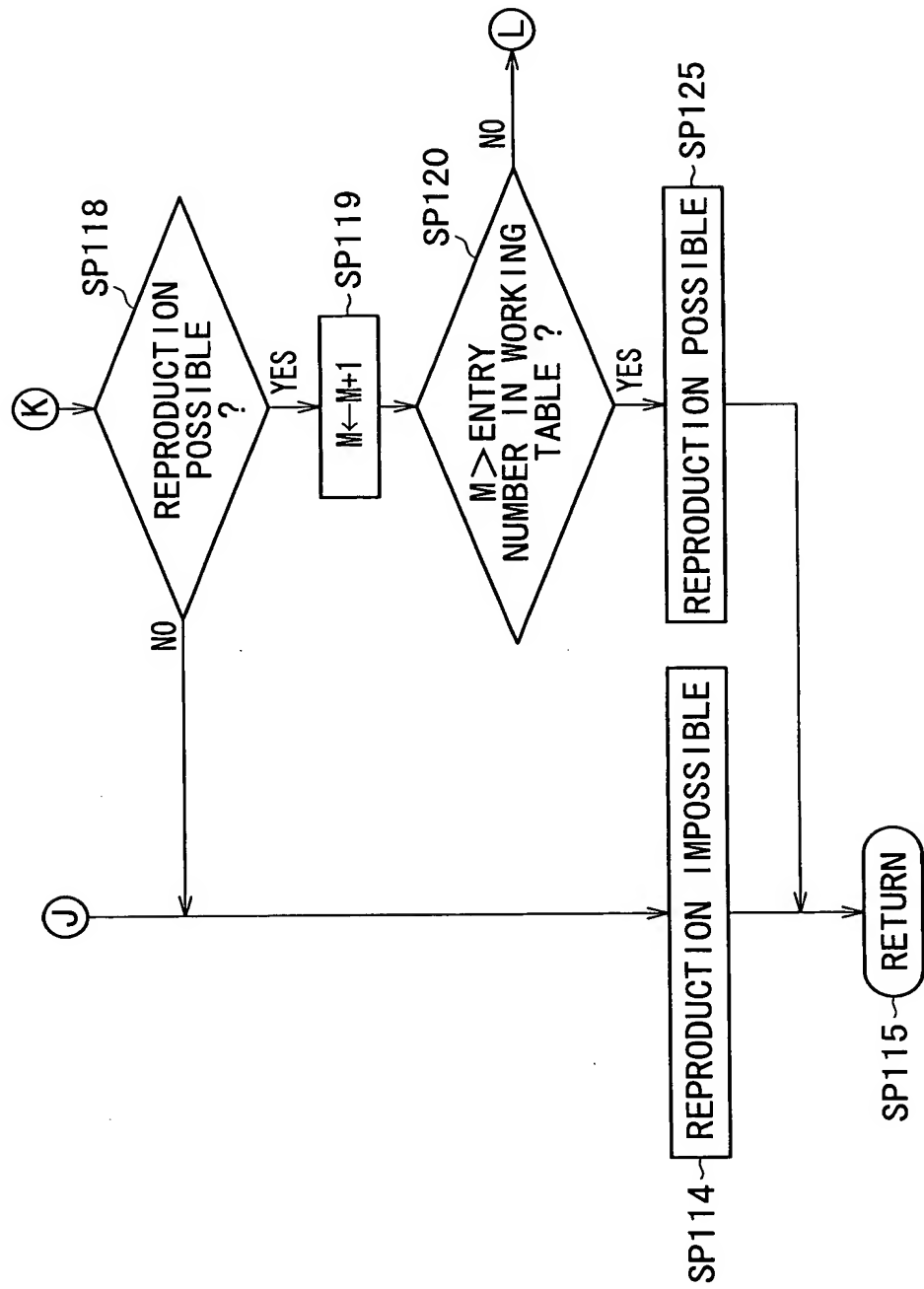


FIG. 16

[illegible]



FIG. 17

| Bit   | SIGNIFICANCE OF bit field | VALUE<br>(EXAMPLE)<br>(BINARY NUMBER) | SIGNIFICANCE OF VALUE<br>(EXAMPLE)       |
|-------|---------------------------|---------------------------------------|--|
| 31:26 | TYPE OF Video Codec       | 001000<br>OTHERS                      | MPEG4 Video Simple Profile<br>reserved   |
| 25:24 | frame rate CODE           | 01<br>10<br>OTHERS                    | 10fps<br>15fps<br>reserved               |
| 23    | variable frame rate FLAG  | 0<br>1                                | FIXED frame rate<br>VARIABLE frame rate  |
| 22:20 | bit rate CODE             | 010<br>100<br>110<br>OTHERS           | 96kbps<br>192Kbps<br>384kbps<br>reserved |
| 19:16 | CODE OF PICTURE SIZE      | 0111<br>1011<br>OTHERS                | 176 × 44<br>352 × 288<br>reserved        |
| 15:10 | TYPE OF Audio Codec       | 010101<br>OTHERS                      | MPEG4 Audio AAC-LC<br>reserved           |
| 9     | reserved                  | 0                                     |  |
| 8     | variable bit rate FLAG    | 0<br>1                                | FIXED bit rate<br>VARIABLE bit rate      |
| 7:4   | bit rate CODE             | 0111<br>1001<br>OTHERS                | 64kbps<br>128kbps<br>reserved            |
| 3     | reserved                  | 0                                     |  |
| 2:0   | sampling rate CODE        | 010<br>101<br>OTHERS                  | 24kHz<br>48kHz<br>reserved               |

## FIG. 18

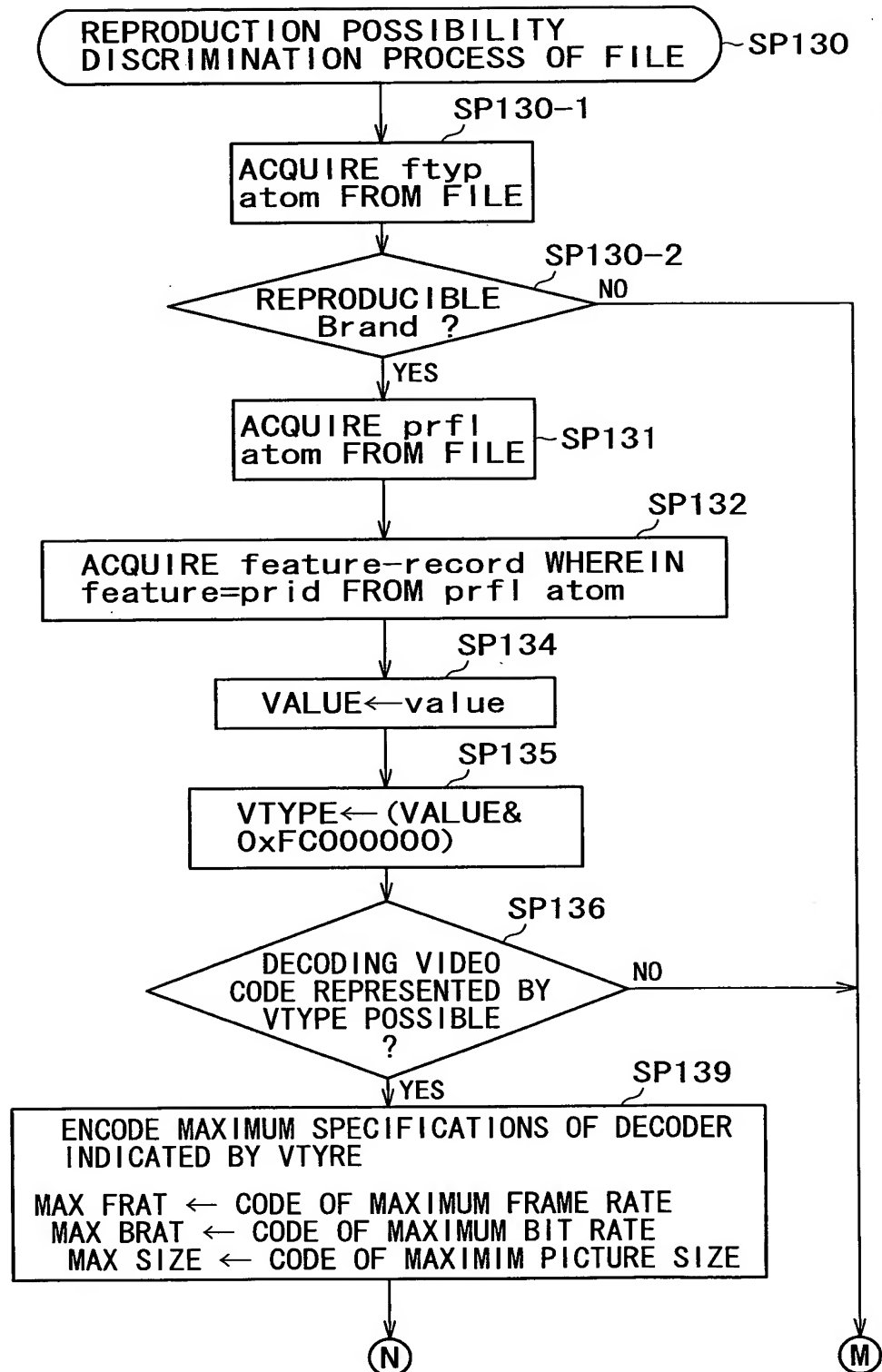
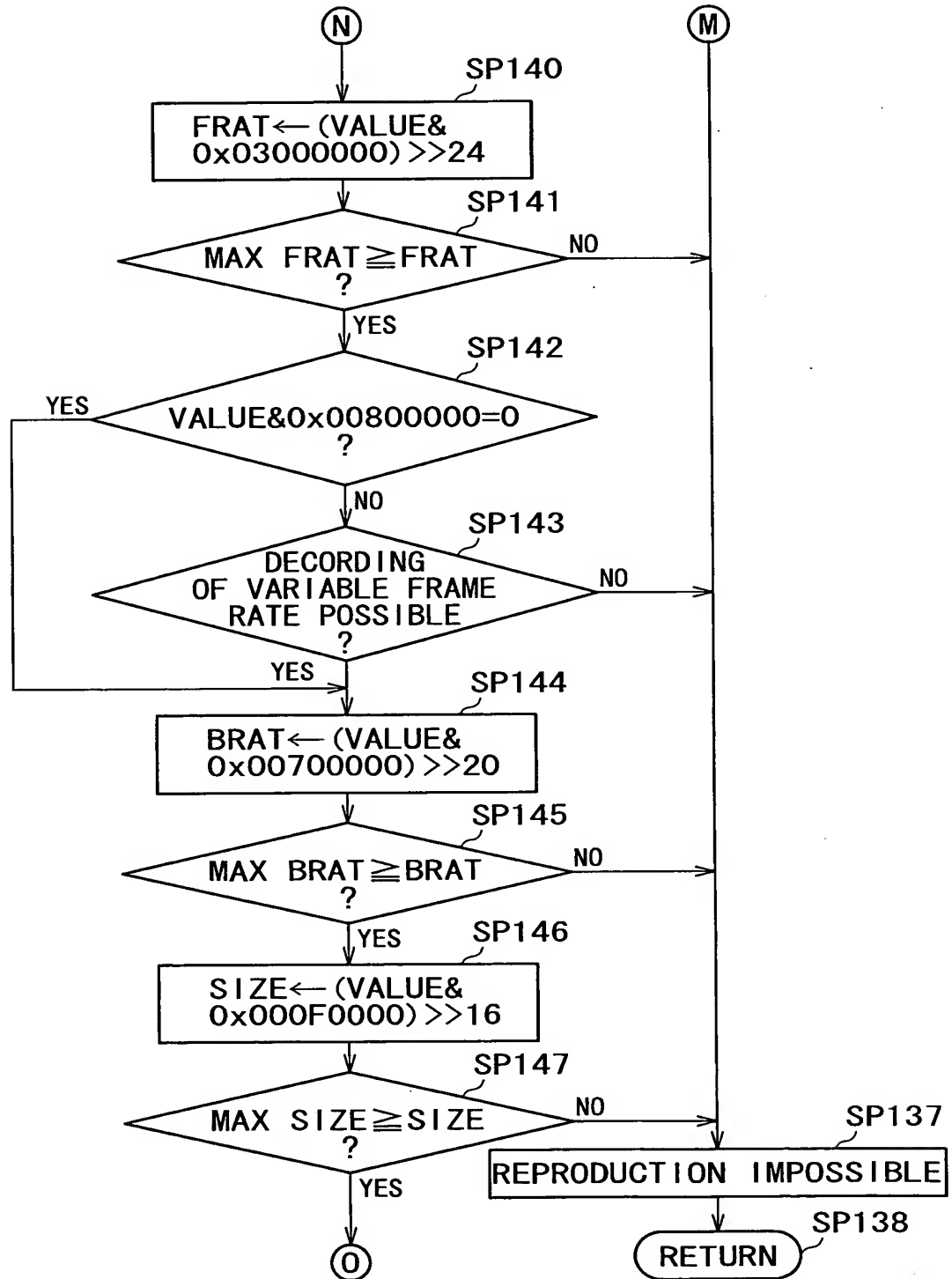


FIG. 19



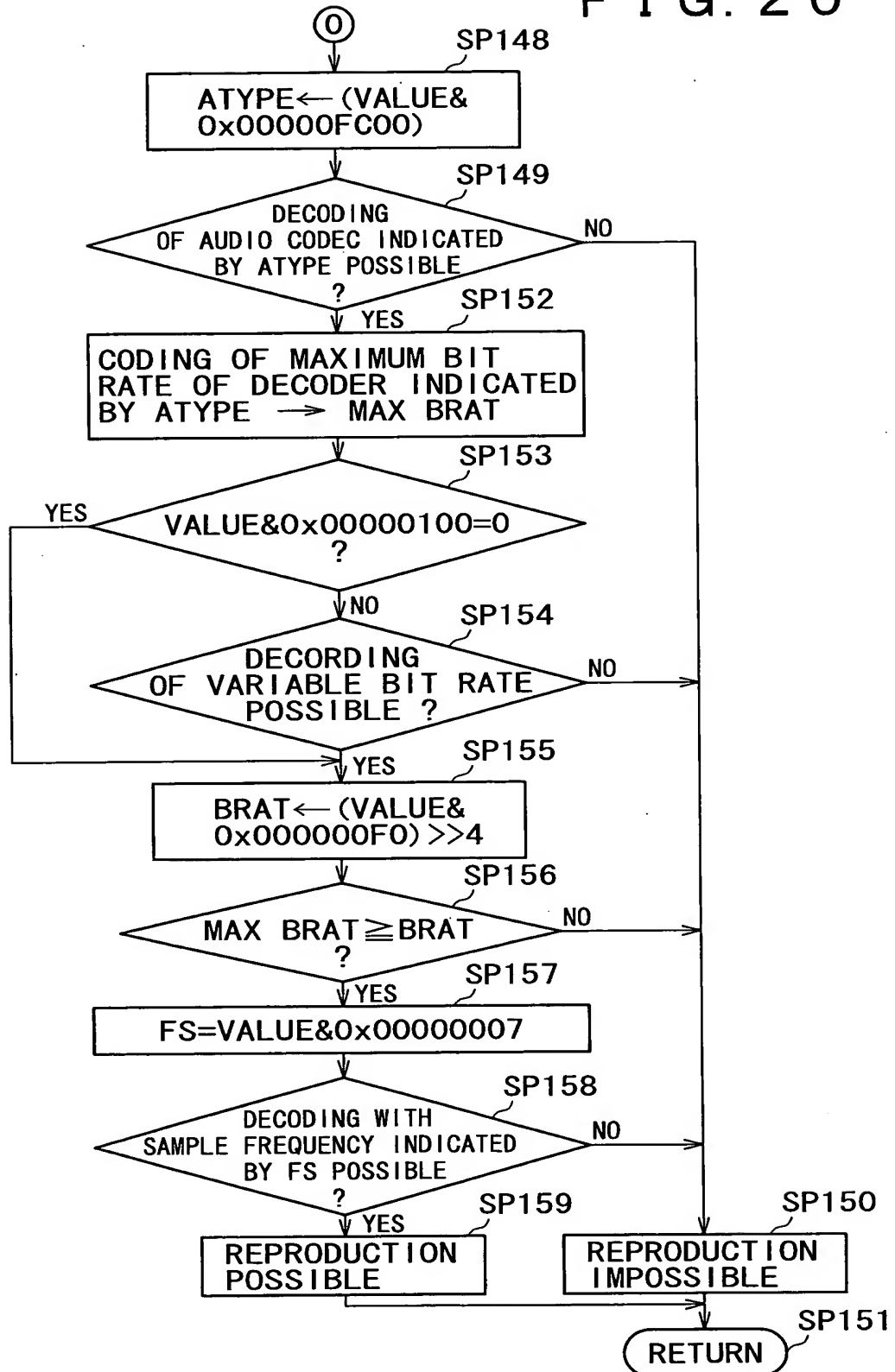
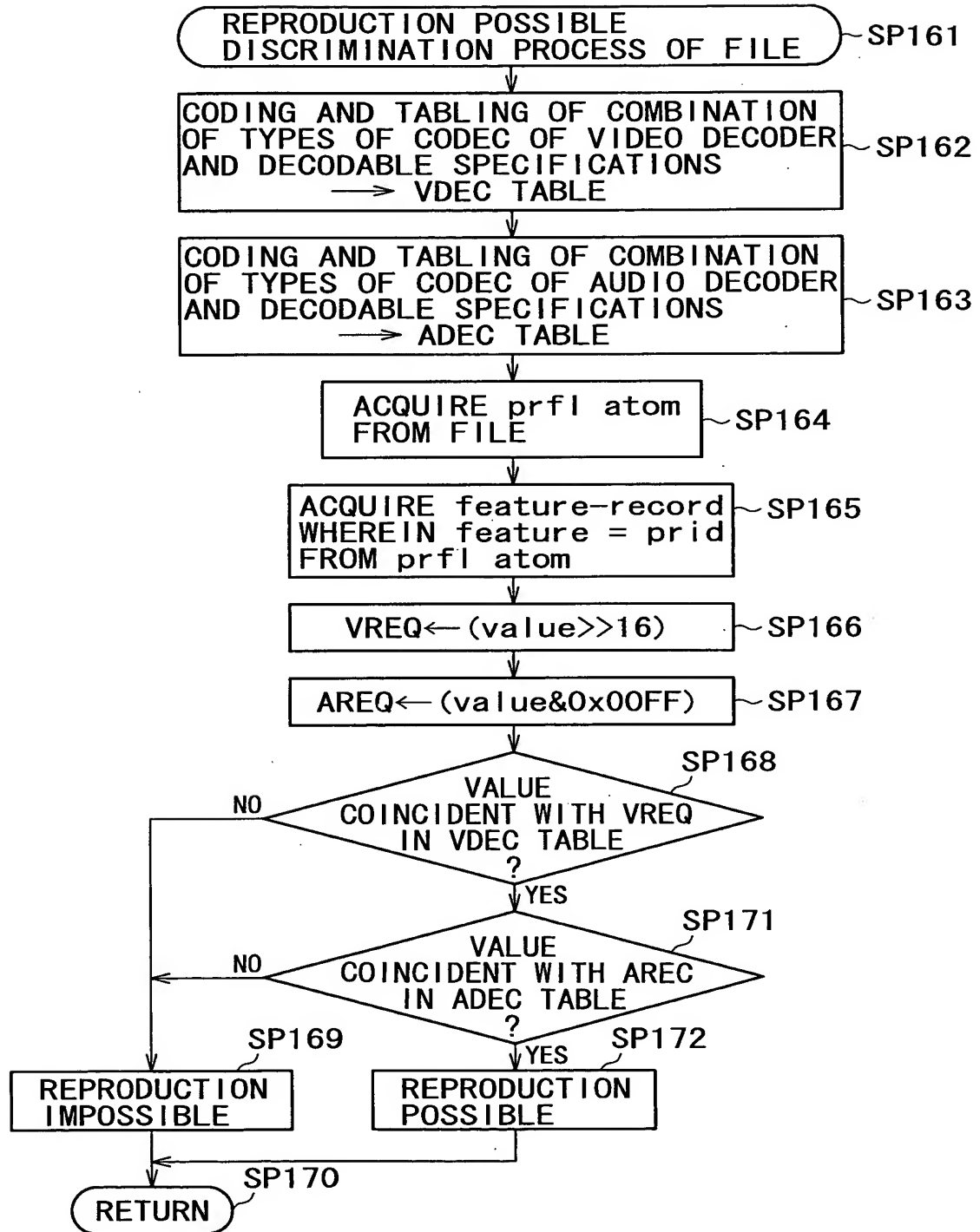


FIG. 21



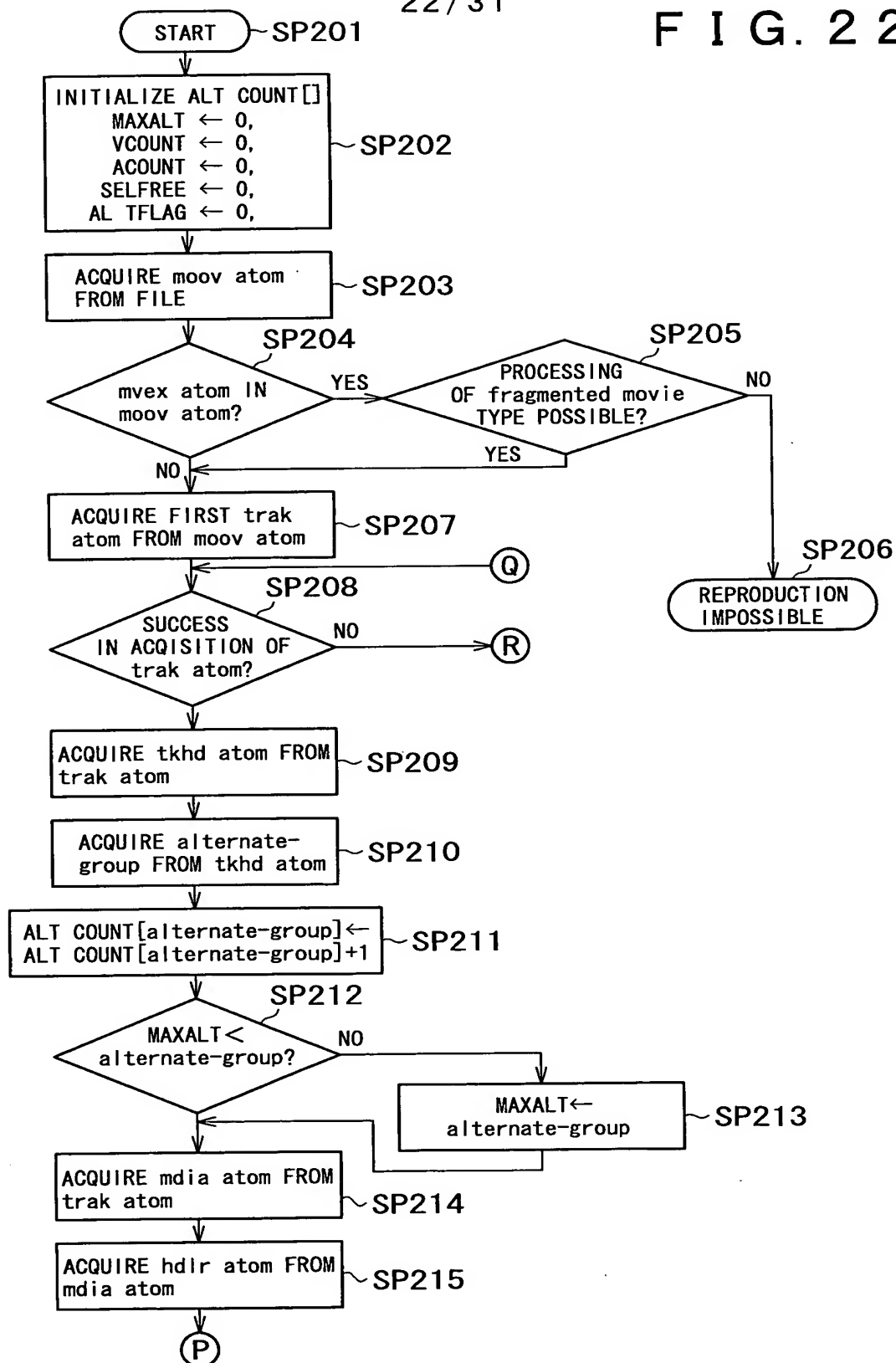


FIG. 23

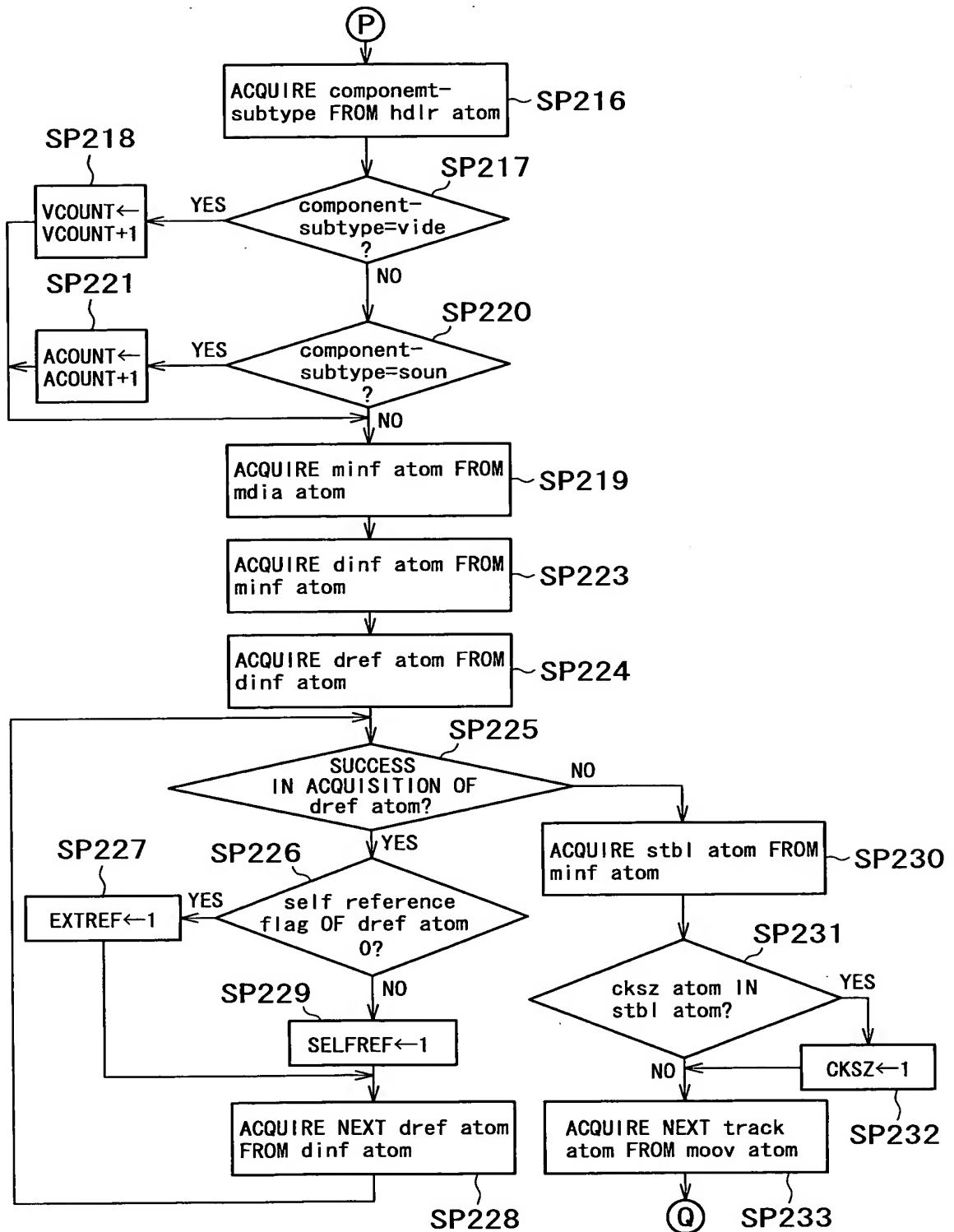


FIG. 24

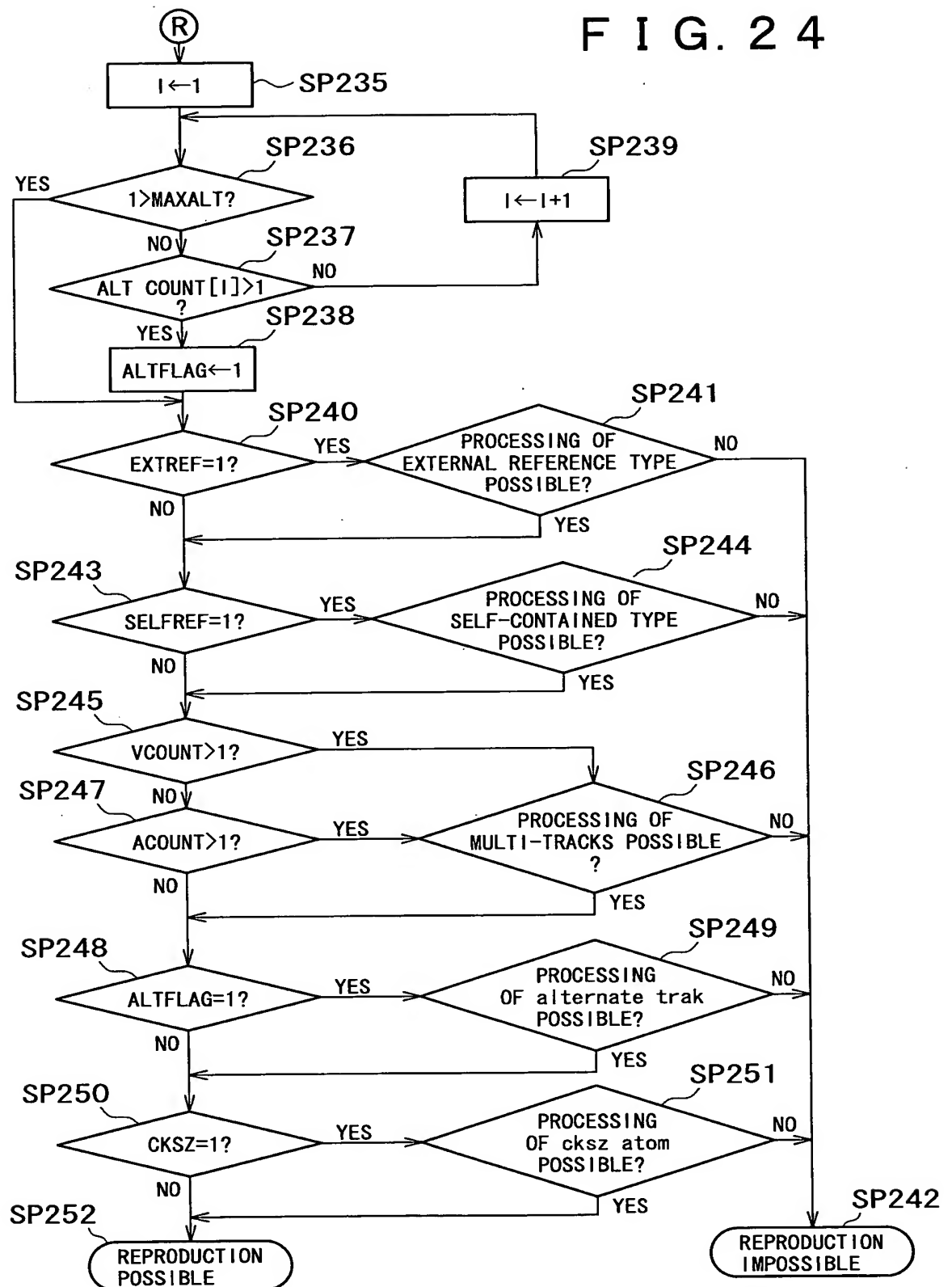




FIG. 25

| value | SIGNIFICANCE                   |
|-------|--------------------------------|
| frmv  | Fragmented Movie Atoms PRESENT |
| mdtk  | TRACK FOR MODIFICATION         |
| altk  | TRACK FOR ALTERNATIVE          |
| exrf  | EXTERNAL REFERENCE PRESENT     |
| slrf  | SELF-CONTAINMENT PRESENT       |
| cksz  | chunk size atom PRESENT        |

# FIG. 26

| feature-record-list |             |         |       | prfl  |
|---------------------|-------------|---------|-------|---|
| track-ID            | sub-part-ID | feature | value |   |
| 1                   | 1           | tkst    | slrf  | <div> <div>-----</div> <div>-----</div> <div>-----</div> </div> |
| 2                   | 1           | tkst    | exrf  |   |
| 3                   | 1           | tkst    | mdtk  |   |
| 4                   | 1           | tkst    | alTk  |   |
| 3                   | 1           | tkst    | exrf  |   |
| 4                   | 1           | tkst    | exrf  |   |
| 4                   | 1           | tkst    | slrf  |   |

## FIG. 27

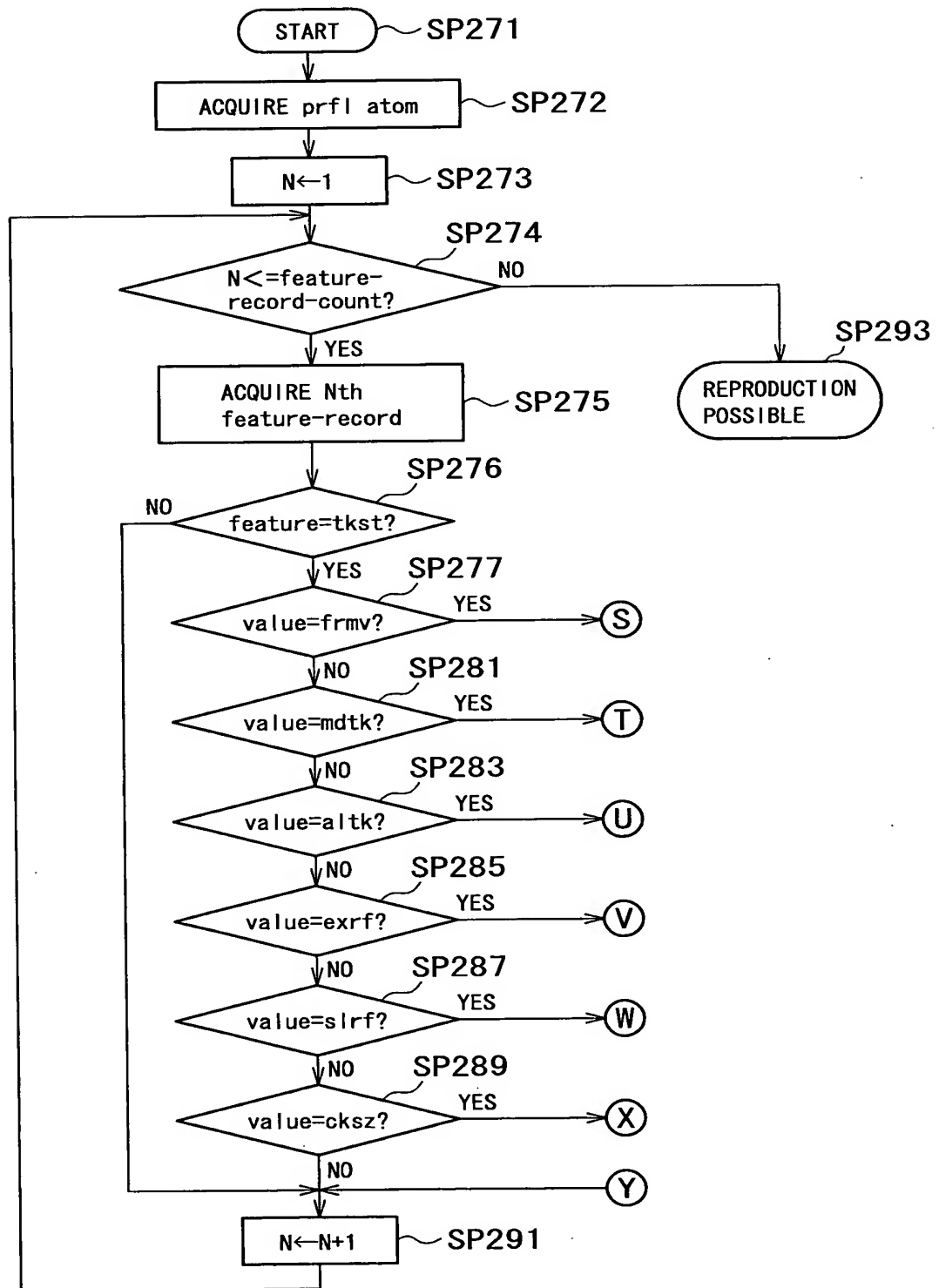


FIG. 28

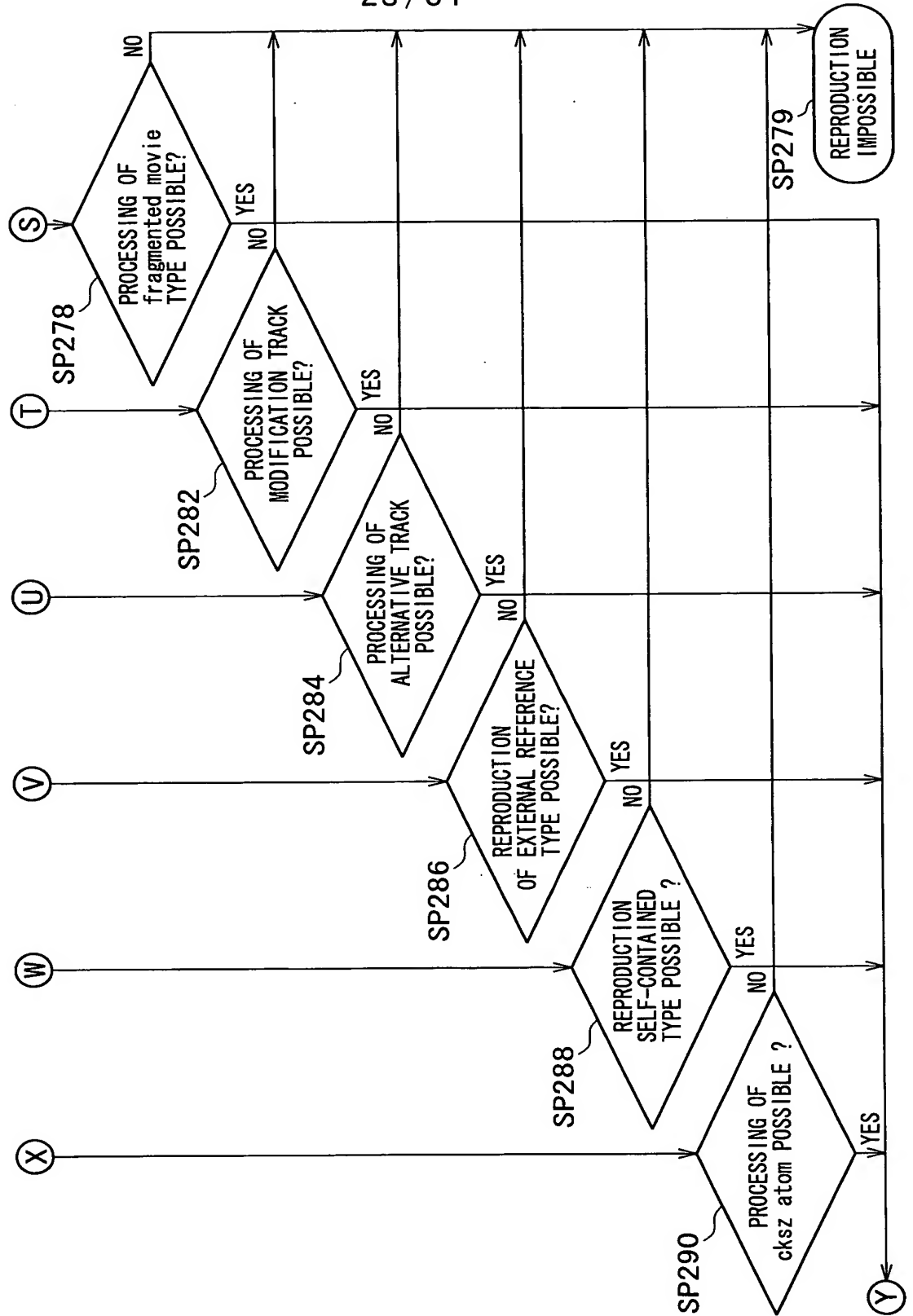


FIG. 29

| feature=fncs |   |
|--------------|---|
| Bit          | SIGNIFICANCE OF EACH Bit (FLAG)             |
| 31           | Fragmented Movie TYPE INCLUDED              |
| 30:24        | reserved                                    |
| 23           | TRACK WHICH MODIFIES MAIN VIDEO TRACK       |
| 22           | TRACK WHICH MODIFIES MAIN AUDIO TRACK       |
| 21           | ALTERNATIVE TRACK FOR MAIN VIDEO TRACK      |
| 20           | ALTERNATIVE TRACK FOR MAIN AUDIO TRACK      |
| 19           | MAIN VIDEO TRACK IN EXTERNAL REFERENCE TYPE |
| 18           | MAIN AUDIO TRACK IN EXTERNAL REFERENCE TYPE |
| 17           | Chunk Size Atom USED                        |
| 16:0         | reserved                                    |

FIG. 30

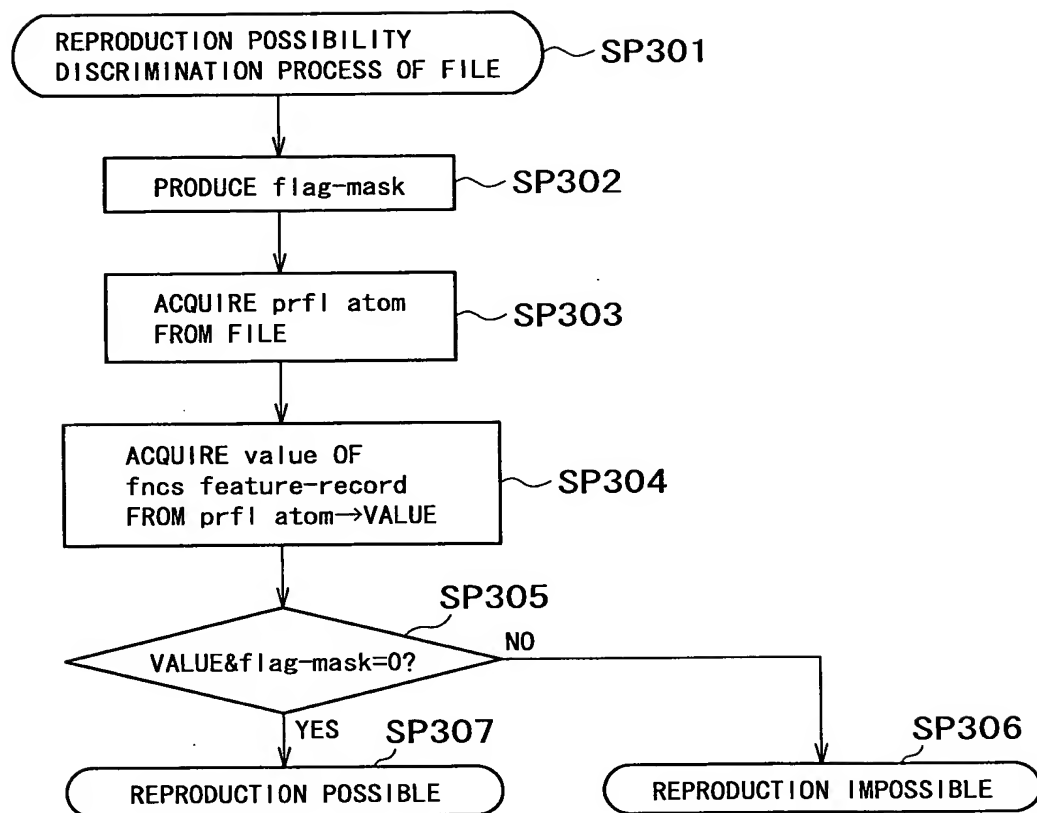


FIG. 31

